Claims

1. A method of optimising the bandwidth usage on a Real-Time Protocol managed link transporting media between User Equipment and a Media Resource Function of a cellular telecommunications network, the method comprising:

sampling, at one of the User Equipment and the Media Resource Function, the rate of packet loss on the link; and

adapting the sending rate over the link in dependence upon the sampled values.

2. A method according to claim 1, wherein the Media Resource Function handles media distribution for Push-to-talk over Cellular services.

3. A method according to claim 1 or 2, said method comprising applying a sliding window to the sampled values, and calculating an average or other statistically representative value across the window, the sending rate being adapted based upon changes in the representative value as the window is advanced.

4. A method according to claim 3 and comprising generally decreasing the media sending rate as the representative value increases, and generally increasing the sending rate as the value decreases, in order to optimise bandwidth usage on the link.

5. A method according to claim 4 and comprising comparing the representative value to a pre-defined acceptable loss rate, it being a pre-condition for decreasing the sending rate, that the representative loss rate exceeds the acceptable loss rate, and it being a precondition for increasing the sending rate that the representative loss rate is less than the acceptable loss rate.

6. A method according to claim 5, it being a further pre-condition for both increasing and decreasing the sending rate that a pre-defined time period has elapsed since the sending rate over the link was last adapted and, in the event that this time period has not elapsed since the sending rate was last adapted, the sending rate is not changed.

7. A method according to claim 6, wherein the pre-defined time period which is used to determine whether or not the sending rate may be increased is greater than that used to determine whether or not the sending rate may be decreased.

8. A method according to any one of the preceding claims, wherein the step of sampling is carried out at one or both of the User Equipment and the Media Resource Function.

9. A method according to claim 8, wherein the UE samples the rate of packet loss on the downlink, whilst the Media Resource Function samples the rate of packet loss on the uplink.

10. A method according to any one of the preceding claims, wherein decisions to adapt the sending rate over the link are made at the Media Resource Function.

11. A method according to claim 10 when appended to claim 9, the UE sending the sampled rate or an analysis of the rate to the Media Resource Function.

12. A Media Resource Function node for use in a cellular telecommunications network, the node handling media sent between itself and user equipment over a Real-Time Protocol managed link, the node comprising:

means for sampling the rate of packet loss on the link and/or means for receiving a sampled rate of packet loss from the UE; and

means for initiating adaption of the bandwidth usage of the link in dependence upon the sample rate.

13. User Equipment for use in a cellular telecommunications network, the User Equipment communicating with a Media Resource Function handling media sent between the user equipment over a Real-Time Protocol managed link, the User Equipment comprising:

means for sampling the rate of packet loss on the link; and

means for sending the sampled rate or an analysis of that rate to the Media Resource Function.